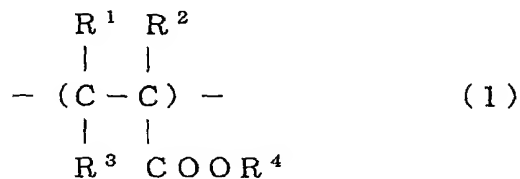


## CLAIMS:

1. A drying shrinkage-reducing agent which comprises a polymer containing as an essential component at least one structural unit (I) represented by the following formula (1):

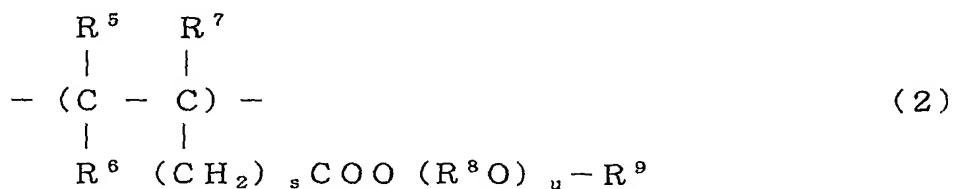
[Chemical 1]



- wherein  $\text{R}^1$ ,  $\text{R}^2$ , and  $\text{R}^3$  independently stand for a hydrogen atom, a methyl group, or a  $-(\text{CH}_2)_p\text{COOX}$  group, wherein X stands for a hydrogen atom, a monovalent metal, a divalent metal, an ammonium group, an organic amine group, or a hydrocarbon group, and p is an integer of 0 - 2; and  $\text{R}^4$  stands for a hydrocarbon group of 4 - 30 carbon atoms, and exhibiting surface tension in the range of 25 - 50 mN/m in a solution containing 0.2 mass% of the polymer in a cement supernatant.

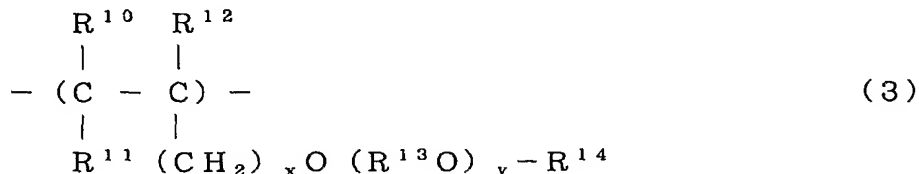
2. A drying shrinkage-reducing agent according to claim 1, wherein said polymer contains as essential components at least one structural unit (I) represented by the formula (1); and at least one structural unit (II) selected among a structural unit (II-a) represented by the following formula (2):

[Chemical 2]



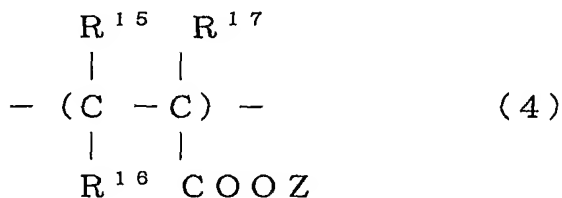
wherein  $R^5$ ,  $R^6$  and  $R^7$  independently stand for a hydrogen atom or a methyl group;  $s$  is an integer of 0 - 2;  $R^8O$  stands for one oxyalkylene group of 2 - 18 carbon atoms or a mixture of two or more such oxyalkylene groups;  $u$  stands for an average addition mol number of oxyalkylene group ( $R^8O$ ) and is in the range of 1 - 300; and  $R^9$  stands for a hydrogen atom or a hydrocarbon group of 1 - 30 carbon atoms, and a structural unit (II-b) represented by the following formula (3):

[Chemical 3]



wherein  $R^{10}$ ,  $R^{11}$  and  $R^{12}$  independently stand for a hydrogen atom or a methyl group;  $x$  is an integer of 0 - 2;  $R^{13}O$  stands for one oxyalkylene group of 2 - 18 carbon atoms or a mixture of two or more such groups;  $y$  stands for an average addition mol number of the oxyalkylene group ( $R^{13}O$ ) and is in the range of 1 - 300; and  $R^{14}$  stands for a hydrogen atom or a hydrocarbon group of 1 - 30 carbon atoms, and contains at least one structural unit (III) represented by the following formula (4):

[Chemical 4]



wherein  $R^{15}$ ,  $R^{16}$  and  $R^{17}$  independently stand for a hydrogen atom, a methyl group, or a  $-(CH_2)_qCOOZ'$ , wherein  $Z'$  stands for a

- hydrogen atom, a monovalent metal, a divalent metal, an ammonium group, or an organic amine group, and q is an integer of 0 - 2; and Z stands for a hydrogen atom, a monovalent metal, a divalent metal, an ammonium group, or an organic amine group, provided that if COOZ' and COOZ are present in the total number of not less than 2, two of them may form an anhydride, in a proportion in the range of 0 - 30 mass% based on the total mass of the polymer.
- 10     3.     A drying shrinkage-reducing agent according to claim 1 or claim 2, wherein said structural unit (I) is present in a proportion in the range of 7 - 99 mass% based on the total mass of the polymer.
- 15     4.     A drying shrinkage-reducing agent according to any one of claims 1 - 3, which is used in a hydraulic material.
- 20     5.     A shrinkage-reducing composition comprising at least one drying shrinkage-reducing agent set forth in any one of claims 1 - 4 and a dispersing agent.
- 25     6.     A shrinkage-reducing composition according to claim 5, wherein the mass ratio of the drying shrinkage-reducing agent and the dispersing agent is in the range of 99.5 : 0.5 - 0.5 : 99.5.